Request to Archive
With The National Centers for Environmental Information
For OceanNOMADS-Ongoing Operational Update of Navy Ocean Models
Provided by NAVOCEANO

2016-05-09

This information will be used by NCEI to conduct an appraisal and make a decision on the request.

1. Who is the primary point of contact for this request?

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NCEI
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2. Name the organization or group responsible for creating the dataset.

DOD/USNAVY/NAVOCEANO > Naval Oceanographic Office, U.S. Navy, U.S. Department of Defense

3. Provide an overview summarizing the scope of data you want to archive. Describe the outputs, data variables, including their measurement resolution and coverage.

Daily output from the Navy's operational global-scale and regional ocean forecast systems (Navy Global HYCOM and Navy Coastal Ocean Model, respectively). The models run once daily, producing a nowcast and forecasts out to 168 hrs (HYCOM) or). For Global HYCOM the output is subset into regions to keep file sizes manageable. This request is for output regions 1,6,7,and 17, and the surface (sfc) "region" only. These regions cover the geography of NOAA's trust resources. Files are written as netCDF-3. Contents for each file represented by the following DDS:

```
Dataset {
  Float64 time[time = 1];
  Float64 tau[time = 1];
  Float64 depth[depth = 40];
  Float64 lat[lat = 876];
  Float64 lon[lon = 626];
  Grid {
   ARRAY:
     Int16 water_temp[time = 1][depth = 40][lat = 876][lon = 626];
   MAPS:
     Float64 time[time = 1];
     Float64 depth[depth = 40];
     Float64 lat[lat = 876];
     Float64 lon[lon = 626];
  } water_temp;
  Grid {
   ARRAY:
     Int16 salinity[time = 1][depth = 40][lat = 876][lon = 626];
   MAPS:
     Float64 time[time = 1];
     Float64 depth[depth = 40];
     Float64 lat[lat = 876];
```

```
    Float64 lon[lon = 626];
  } salinity;
  Grid {
   ARRAY:
    Int16 surf_el[time = 1][lat = 876][lon = 626];
   MAPS:
    Float64 time[time = 1];
    Float64 lat[lat = 876];
    Float64 lon[lon = 626];
  } surf_el;
  Grid {
   ARRAY:
    Int16 water_u[time = 1][depth = 40][lat = 876][lon = 626];
   MAPS:
    Float64 time[time = 1];
    Float64 depth[depth = 40];
    Float64 lat[lat = 876];
    Float64 lon[lon = 626];
  } water_u;
  Grid {
   ARRAY:
    Int16 water_v[time = 1][depth = 40][lat = 876][lon = 626];
   MAPS:
    Float64 time[time = 1];
    Float64 depth[depth = 40];
    Float64 lat[lat = 876];
    Float64 lon[lon = 626];
  } water_v;
} hycom_region1/20160218/hycom_glb_regp01_2016021800_t168.nc;
```

4. What is the time period covered by the dataset? (YYYY-MM-DD, YYYY-MM or YYYY)

From 2009-02

Ongoing as continuous updates to the data record

5. Edition or version number(s) of the dataset:

N/A

6. Approximate date when the dataset was or will be released to the public:

2009-02

7. Who are the expected users of the archived data? How will the archived data be used?

Users for this data include researchers (NOAA and other governmental, academics, NGO), ocean modelers, marine-ecosystem modelers, IOOS Regional Associations, educators, commercial sector. They are used to provide inputs for other models, to aid in the construction of climatologies, and generally, as estimates of the time-evolving ocean state.

8. Has the dataset undergone user evaluation and/or an independent review process? Did NCEI participate in design reviews?

Each model has undergone evaluation per the Navy Administrative Modeling Oversight Panel (AMOP) standard

procedures. More information on Navy operational modeling, including the AMOP process, can be found in Burnett et al (2014): Oceanography, v.27/3, pp 24-31.

9. Describe the dataset's relationship to other archived datasets, such as earlier versions or related source data. If this is a new version, how does it improve upon the previous version(s)?

This datastream represents the continuous (daily) update that builds upon the dataset documented at https://www.ncdc.noaa.gov/atrac/projectdetails.html?id=7866

10. List the input datasets and ancillary information used to produce the data.

Atmospheric forcing from Navy operational NAVGEM model; open boundary forcing from Navy Global HYCOM; assimilated data includes satellite sea-surface height, profiles from ship- aircraft-, and drifter-based profilers. See https://www.ncdc.noaa.gov/data-access/model-data/ocean-nomads

11. List web pages and other links that provide information on the data.

https://www.ncdc.noaa.gov/data-access/model-data/ocean-nomads

12. List the kinds of documents, metadata and code that are available for archiving. For example, data format specifications, user guides, algorithm documentation, metadata compliant with a standard such as ISO 19115, source code, platform/instrument metadata, data/process flow diagrams, etc.

1. Model output files and ISO compliant metadata

13. Indicate the data file format(s).

1. netCDF-3

14. Are the data files compressed?

gzip

15. Provide details on how the files are named and how they are organized (e.g., file_name_pattern_YYYYMM.tar in monthly aggregations).

See accompanying spreadsheet at https://drive.google.com/open?id=1TWKF6G0MnS21vGZntrN6jlmEYGUd11vlvNxPUTUZQak

16. Explain how to access sample data files and/or a file listing for previewing. If it is not available now, when will it be available?

See accompanying spreadsheet at https://drive.google.com/open?id=1TWKF6G0MnS21vGZntrN6jlmEYGUd11vlvNxPUTUZQak

17. What is the total data volume to be submitted?

Continuous Data: data volume rate for a continuous data production.

Total Data Volume Rate:	74.5GB per Day
Data File Frequency:	885 per Day
Data Production Start:	2016-05-09

18. Are later updates, revisions or replacement files anticipated? If so, explain the conditions for submitting these additional data to the archive.

This is part of an ongoing, daily operational forecast process.

19. Describe the server that will connect to the ingest server at NCEI for submitting the data.

Physical Location:	Maryland (College Park?)
System Name:	ftp://ftp.mpc.ncep.noaa.gov/grids/operational/NCOM/regional/ and ftp://ftp.mpc.ncep.noaa.gov/grids/operational/GLOBALHYCOM/Navy/
System Owner:	unknown
Additional Information:	

20. What are the possible methods for submitting the data to NCEI? Select all that apply.

1. FTP PULL

21. Identify how you would like NCEI to distribute the data. Web access support depends on the resources available for the dataset.

1. Advanced web services (e.g., THREDDS Catalog Service)

22. Will there be any distribution, usage, or other restrictions that apply to the data in the archive?

No known constraints apply to the data.

23. Discuss the rationale for archiving the dataset and the anticipated benefits. Mention any risks associated with not archiving the dataset at NCEI.

These data-assimilating models represent ocean state estimates and forecasts produced operationally by the US Navy and used widely by other modelers, researchers, educators, and the commercial sector. Creating long timeseries of analysis fields results in 4D, time-evolving state estimates that will remain useful at least until replacement by a reanalysis project of similar spatial resolution. As well, these particular models, due to their regional coverage at very high spatial resolution, do not have analogues within NOAA's modeling portfolio.

24. Are the data archived at another facility or are there plans to do so? Please explain.

A similar Global HYCOM dataset is archived by the Global HYCOM Consortium. Also, NOAA/NWS operates a version of Global HYCOM but at present the output is not archived. The NCOM models are not archived elsewhere.

25. Is there an existing agreement or requirement driving this request to archive? Have you already contacted someone at NCEI?

No

26. Do you have a data management plan for your data?

No

27. Have funds been allocated to archive the data at NCEI?

No

28. Identify the affiliated research project, its sponsor, and any project/grant ID as applicable.

N/A

29. Is there a desired deadline for NCEI to archive and provide access to the data?

No deadlines for archive or access.

30. Add any other pertinent information for this request.

See https://drive.google.com/open?id=1TWKF6G0MnS21vGZntrN6jlmEYGUd11vlvNxPUTUZQak